WHAT IS CLAIMED IS:

1. A system for duplicate address detection in a communication network, said system comprising:

a plurality of communication nodes, a particular one of said communication nodes generating a tentative interface address and transmitting a solicitation message including the tentative interface address; and

a proxy node for receiving the solicitation message, said proxy node operable to determine from the solicitation message whether the tentative interface address is allocated to another of said plurality of communication nodes, and further operable to send a response message to said particular communication node if said proxy node determines that the tentative interface address is allocated to another of said plurality of communication nodes, said response message indicating that the tentative interface address is already in use.

2. The system of claim 1, wherein the particular communication mode transmits a context activation message to the proxy node at least as early as said transmission of the solicitation message, said context activation message indicative of a request for an activation of a packet data protocol context.

3. The system of claim 2, wherein the proxy node, responsive to the context activation message, generates a packet data protocol context associated with the particular communication node.

4. The system of claim 2, wherein the packet data protocol context is activated in accordance with IPv6.

5. The system of claim 1, wherein the particular communication node is allocated the tentative interface address as an allocated interface address if the proxy node determines that the tentative interface address is not allocated to another of said plurality of communication nodes.

6. The system of claim 5, wherein the particular communication node begins using the allocated interface address when no response is received to the solicitation message.

7. The system of claim 5, wherein the particular communication node begins using the allocated interface address when no response is received after repeating the solicitation message a predetermined number of times.

8. The system of claim 5, wherein the proxy node transmits a router advertisement message including network address prefix information.

9. The system of claim 8, wherein the transmission of the router advertisement message is performed automatically by the proxy node.

10. The system of claim 8, wherein the transmission of the router advertisement message is in response to the receiving, at the proxy node, of a router solicitation message transmitted by the particular communication node.

11. The system of claim 8, wherein the particular communication node receives the router advertisement message and determines a full network address associated with the particular communication node from the router advertisement message.

12. The system of claim 8, wherein the particular communication node receives the router advertisement message, extracts the network address prefix information from the router advertisement message, and concatenates the network prefix address prefix information and the tentative interface address to form a full network address associated with the particular communication node.

13. The system of claim 12, wherein the full network address comprises a site-local address.

14. The system of claim 12, wherein the full network address comprises a global address.

15. The system of claim 8, wherein the proxy node stores at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node.

16. The system of claim 1, wherein the tentative interface address comprises a link-local address.

17. The system of claim 1, wherein the particular communication node subsequently generates a new tentative interface address and transmits a new solicitation message including the new tentative interface address.

18. The system of claim 17, wherein the proxy node receives the new solicitation message, determines whether the new tentative interface address is allocated to another of said plurality of communication nodes, generates a new response message to the particular node if the proxy node determines that the new tentative interface address is allocated to another of said plurality of communication nodes, and allocates the new tentative interface address as a new allocated interface address if the proxy node determines that the new tentative interface address is not allocated to another of said plurality of communication nodes.

19. The system of claim 17, wherein the proxy node receives the new solicitation message, and transmits a new response message to the particular node if the allocation of an additional interface address associated with the particular node is not allowed.

20. The system of claim 17, wherein the generation of the new tentative interface address is performed in accordance with a stateless IPv6 address autoconfiguration procedure.

21. The system of claim 1, wherein the particular communication node comprises a mobile station.

22. The system of claim 1, wherein the particular communication node comprises terminal equipment.

23. The system of claim 1, wherein the proxy node comprises a gateway node.

24. The system of claim 23, wherein the gateway node comprises a gateway general packet radio service support node (GGSN).

25. The system of claim 1, wherein the proxy node comprises a network bridging device for interfacing the plurality of communication nodes to at least one packet data network.

26. The system of claim 1, wherein the communication network comprises at least one of a cable modem network, an IMT-2000 network, a CDMA-2000 network, a UMTS network, and a General Packet Radio Service (GPRS) network.

27. A method for duplicate address detection in a communication network, said method comprising:

generating, by a first one of a plurality of communication nodes, a first tentative interface address;

transmitting, from the first communication node, a first solicitation message including the first tentative interface address;

receiving, at a proxy node, the first solicitation message;

determining, by the proxy node, that the first tentative interface address is available for use by the first communication node;

allocating the first tentative interface address as a first allocated interface address associated with the first communication node;

generating, by a second one of the plurality of communication nodes, a second tentative interface address;

transmitting, from the second communication node, a second solicitation message including the second tentative interface address;

receiving, at the proxy node, the second solicitation message;

determining, by the proxy node, whether the second tentative interface address corresponds to the first allocated interface address;

generating a first response message if the proxy node determines that the second tentative interface address corresponds to the first allocated interface address; and

transmitting the first response message to the second communication node.

28. The method of claim 27, further comprising the steps of:

generating, by the first communication node prior to the step of generating the first tentative interface address, a context activation message, the context activation message indicative of a request for the activation of a packet data protocol context;

transmitting the context activation message from the first communication node to the proxy node; and

generating, at the proxy node, a packet data protocol context associated with the first communication node.

29. The method of claim 27, further comprising the steps of:

generating, at the proxy node, a router advertisement message, the router advertisement message including network address prefix information;

transmitting, from the proxy node, the router advertisement message;

receiving, at the first communication node, the router advertisement message; and

determining, using the router advertisement message, a full network address associated with the first communication node.

30. The method of claim 29, wherein the step of determining the full network address comprises:

extracting the network address prefix information from the router advertisement message; and

concatenating, by the first communication node, the network address prefix and the first allocated interface address to form the full network address associated with the first communication node.

31. The method of claim 29, wherein the step of generating the router advertisement message is in response to the receiving, at the proxy node, of a router solicitation message generated by and transmitted from the first communication node.

32. The method of claim 29, wherein the first tentative interface address comprises a tentative interface identifier.

33. The method of claim 30, wherein the full network address comprises a site-local address.

34. The method of claim 30, wherein the full network address comprises a global address.

35. The method of claim 29, wherein the communication network comprises a General Packet Radio Service (GPRS) network and the proxy node comprises a gateway support node, said method further comprising the steps of:

storing, by the gateway support node, at least a characteristic portion of a full network address in a packet data protocol context associated with the first communication node;

generating, by the gateway support node, a context modification message indicative of the storing of the at least a characteristic portion of the full network address; and

transmitting, from the gateway support node to a serving support node, the context modification message.

36. The method of claim 27, further comprises the steps of:

generating, by the first communication node, a third tentative interface address;

transmitting, from the first communication node, a third solicitation message including the third tentative interface address;

receiving, at the proxy node, the third solicitation message; and

determining, by the proxy node, if the third tentative interface address is allocated to one of the plurality of communication nodes.

37. The method of claim 36, further comprising the step of:

allocating the third tentative interface address as a second allocated interface address associated with the first communication node if the third tentative interface address is not allocated to one of the plurality of communication nodes.

38. The method of claim 36, further comprising the steps of:

generating a second response message if the proxy node determines that the third tentative interface address is allocated to one of the plurality of communication nodes;

transmitting the second response message to the first communication node;

receiving, at the first communication node, the second response message; and

transmitting, from the first communication node, a third solicitation message including a fourth tentative interface address in response to the second response message.

39. The method of claim 38, further comprising the step of allocating the third tentative interface address as a third allocated interface address if the proxy node determines that the fourth tentative interface address is not allocated to one of the plurality of communication nodes.

40. The method of claim 36, further comprising the steps of:

generating a second response message if the allocation of an additional interface address associated with the first communication node is not allowed; and

transmitting the second response message to the first communication node.

41. A proxy node for duplicate address detection in a communication network, said proxy node comprising:

an input interface for receiving a solicitation message including a tentative interface address, the tentative interface address being associated with a particular one of a plurality of communication nodes;

a processor operable to determine from the received solicitation message, and using obtained information relating to interface addresses that are currently allocated to the plurality of communication nodes, whether the tentative interface address is allocated to another of the plurality of communication nodes, and generate a response message if the processor determines that the tentative interface address is allocated to another of said plurality of communication nodes; and

an output interface in communication with said processor, for transmitting said response message to the particular communication node.

42. The proxy node of claim 41, the proxy node further comprising means for storing the information relating to interface addresses that are currently allocated to the plurality of communication nodes in a memory associated with the proxy node.

43. The proxy node of claim 41, the proxy node further comprising means for retrieving the information relating to interface addresses that are currently allocated to the plurality of communication nodes from a support node.

44. The proxy node of claim 43, wherein the support node comprises a gateway general packet radio service support node (GGSN).

45. The proxy node of claim 41, wherein the processor is further operable to receive a context activation message indicative of a request from the particular communication node for the activation of a packet data protocol context, and generate a packet data protocol context associated with the particular communication node.

46. The proxy node of claim 41, wherein the processor is further operable to transmit a router advertisement message, the router advertisement message including network address prefix information.

47. The proxy node of claim 46, wherein the transmitting of the router advertisement message is in response to a reception of a router solicitation message transmitted from the particular communication node.

48. The proxy node of claim 41, wherein the processor is further operable to store at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node.

49. The proxy node of claim 48, wherein the processor is further operable to transmit a context modification message indicative of the storing of the at least a characteristic portion of the full network address.

50. The proxy node of claim 41, wherein the particular communication node comprises a mobile station.

51. The proxy node of claim 41, wherein the proxy node comprises a gateway node.

52. The proxy node of claim 51, wherein the gateway node comprises a gateway general packet radio service support node (GGSN).

53. The proxy node of claim 41, wherein the proxy node comprises a network bridging device interfacing the plurality of communication nodes to at least one packet data network.

54. The proxy node of claim 41, wherein the communication network comprises at least one of a cable modem network, an IMT-2000 network, a CDMA-2000 network, a UMTS network, and a General Packet Radio Service (GPRS) network

55. A method for duplicate address detection in a communication network, said method comprising:

receiving, by a proxy node, a solicitation message including a tentative interface address, the tentative interface address being associated with a particular one of a plurality of communication nodes;

determining, from the solicitation message, whether the tentative interface address is allocated to another of said plurality of communication nodes; and

sending a response message to said particular communication node if, in said determining step, the proxy node determines that the tentative interface address is allocated to another of said plurality of communication nodes.

56. The method of claim 55, further comprising the steps of:

receiving, from the particular communication node, a context activation message indicative of a request from the particular communication node for the activation of a packet data protocol context; and

generating a packet data protocol context associated with the particular communication node.

57. The method of claim 55, further comprising the steps of:

generating a router advertisement message, the router advertisement message including network prefix information; and

transmitting the router advertisement message.

58. The method of claim 57, wherein the step of generating the router advertisement message is in response to a reception of a router solicitation message from the particular communication node.

59. The method of claim 55, further comprising the step of:

storing at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node.

60. The method of claim 59, further comprising the step of:

transmitting a context modification message indicative of the storing of the at least a characteristic portion of the full network address.

61. A computer readable medium, the computer readable medium storing software instructions, the software instructions operable, when executed by a processor, to:

receive, by a proxy node, a solicitation message including a tentative interface address, the tentative interface address being associated with a particular one of a plurality of communication nodes;

determine, from the solicitation message, whether the tentative interface address is allocated to another of said plurality of communication nodes; and

send a response message to said particular communication node if the proxy node determines that the tentative interface address is allocated to another of said plurality of communication nodes.

62. The computer readable medium of claim 61, the software instructions further operable, when executed by a processor, to:

receive, from the particular communication node, a context activation message indicative of a request from the particular communication node for the activation of a packet data protocol context; and

generate a packet data protocol context associated with the particular communication node.

63. The computer readable medium of claim 61, the software instructions further operable, when executed by a processor, to:

generate a router advertisement message, the router advertisement message including network prefix information; and

transmit the router advertisement message.

64. The computer readable medium of claim 63, wherein the generating the router advertisement message is in response to a reception of a router solicitation message from the particular communication node.

65. The computer readable medium of claim 61, the software instructions further operable, when executed by a processor, to:

store at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node.

66. The computer readable medium of claim 65, the software instructions further operable, when executed by a processor, to:

transmit a context modification message indicative of the storing of the at least a characteristic portion of the full network address.

67. The computer readable medium of claim 66, the software instructions further operable, when executed by a processor, to:

transmit a context modification message indicative of the storing of the at least a characteristic portion of the full network address.